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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/758,022	01/16/2004	Shoichi Okamura	SUT-0232	6241

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EXAMINER
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HO, ALLEN C

ART UNIT	PAPER NUMBER
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2882

DATE MAILED: 05/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/758,022	<b>Applicant(s)</b> OKAMURA ET AL.	
	<b>Examiner</b> Allen C. Ho	<b>Art Unit</b> 2882	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 January 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>012004</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. The omitted element is: radiation detecting means.

While claims 1-6 recite a signal sampling means for taking radiation detection signals from radiation detecting means at predetermined sampling time intervals, the radiographic apparatus does not include a radiation detecting means.

### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1 and 3-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Hsieh (U. S. Patent No. 5,249,123).

With regard to claim 1, Hsieh disclosed a radiographic apparatus comprising: radiation emitting means (13); signal sampling means (31); time lag removing means (26).

With regard to claims 3-5, these claims fail to set forth additional structural limitations. Accordingly, they are rejected with claim 1. MPEP § 2114.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hsieh (U. S. Patent No. 5,249,123) as applied to claim 1 above, and further in view of Roos *et al.* (U. S. Patent No. 6,041,097).

With regard to claim 6, Hsieh disclosed a radiographic apparatus as defined in claim 1. However, Hsieh failed to disclose a flat panel x-ray detector.

Roos *et al.* disclosed a CT system comprising a flat panel x-ray detector. Roos *et al.* taught that a flat panel detector would provide a volumetric image data acquisition system which improves x-ray utilization resulting in faster patient scan times and reduced radiation dose (column 2, lines 53-57). In addition, a flat panel x-ray detector has improved spatial resolution due to its fine detector matrix spacings (column 2, lines 58-62).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to employ an x-ray flat panel detector as the radiation detecting means, since a person would be motivated to achieve the above mentioned advantages.

***Double Patenting***

7. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8. Claims 1, 2, and 6 provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 14, and 15 of copending Application No. 10/853,357. Although the conflicting claims are not identical, they are not patentably distinct from each other.

9. Claims 1, 2, and 6 provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 2, 4, 10, and 11 of copending Application No. 10/885,634. Although the conflicting claims are not identical, they are not patentably distinct from each other.

10. Claims 1, 2, and 6 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 2, and 5 of copending Application No. 10/887,920. Although the conflicting claims are not identical, they are not patentably distinct from each other.

11. Claims 1, 2, and 6 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 5, and 6, of copending

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Application No. 10/901,212. Although the conflicting claims are not identical, they are not patentably distinct from each other.

12. Claims 1, 2, and 6 provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 3, and 8 of copending Application No. 10/958,297. Although the conflicting claims are not identical, they are not patentably distinct from each other.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

### *Conclusion*

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- (1) Nagaoka *et al.* (U. S. Pub. No. 2005/0036582 A1) disclosed an x-ray CT apparatus and afterglow correction method.
- (2) Hsieh *et al.* (U. S. Patent No. 6,493,646 B1) disclosed a high order primacy decay correction for CT imaging system detectors.
- (3) Crawford *et al.* (U. S. Patent No. 5,644,610) disclosed a multiprocessor afterglow artifact correction filter for use with CT scanners.
- (4) Hsieh *et al.* (U. S. Patent No. 5,359,638) disclosed a method for recursive filtering residual afterglow from previous computed tomography scans.
- (5) King *et al.* (U. S. Patent No. 5,265,013) disclosed compensation of CT data for x-ray detector afterglow artifacts.

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(6) Levinson (U. S. Patent No. 5,517,544) disclosed afterglow artifact reduction.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allen C. Ho whose telephone number is (571) 272-2491. The examiner can normally be reached on Monday - Friday from 8:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward J. Glick can be reached at (571) 272-2490. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Allen C. Ho  
Primary Examiner  
Art Unit 2882

16 May 2005